



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,190	08/17/2006	Avneesh Maheshwari	NL04 0157 US1	3514
65913	7590	02/16/2011	EXAMINER	
NXP, B.V. NXP INTELLECTUAL PROPERTY & LICENSING M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			MCCORD, PAUL C	
			ART UNIT	PAPER NUMBER
			2614	
			NOTIFICATION DATE	DELIVERY MODE
			02/16/2011	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

**Office Action Summary****Application No.**

10/590,190

**Applicant(s)**

MAHESHWARI ET AL.

**Examiner**

PAUL MCCORD

**Art Unit**

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 December 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-940)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date 12/16/10
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### **Claim Rejections - 35 USC § 101**

1. Applicant's amendments of 12/16/10 suffice to obviate the 35 U.S.C. 101 rejections of claims 1, 10.

### **Claim Rejections - 35 USC § 112**

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites a separation means functional to operate on a data stream "based on said determined length." The term lacks antecedent basis and is unclear. Claim 10 recites separating a subset of information of a data stream "based on said determined length." The term lacks antecedent basis and is unclear. Appropriate correction is required.

### **Claim Rejections - 35 USC § 103**

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-19 rejected under 35 U.S.C. 103(a) as being unpatentable over Divine et al. (Disclosed by Applicant in IDS dated 8/17/06 and already of record) and further in view of Benbasset et al. (US Patent 5657454 and hereinafter Ben).

6. Regarding claim 1, 10, 15

Divine teaches:

A decoding apparatus for decoding a data stream comprising a plurality of data blocks (Divine: Abstract), said apparatus comprising:

a. size determination means for processing a subset of the information of said data stream in order to determine the length of a first data block to be decoded (Divine: Column 8:

lines 40-54; Col 39, l. 35-40: a frame includes a header comprising a block length indicator for determining the number of samples encoded in the frame as a payload size);

b. separation means for separating said first data block from said data stream based on said determined length (Divine: Col 39, l. 35-40; Col 72, l. 59-67: a first data block is decoded for transform coefficients, header information such as bit allocation information and block length which is used to extract payload bits); and

c. parallel processing means for decoding a subsequent second data block while said first data block is decoded (Divine: Col 70, l. 45-67: parallel processing occurs on subsequent channels of data.)

Divine does not explicitly teach the calculation of a length of a first data block or the separation and processing based on a calculated length.

In a related field of endeavor Ben teaches:

An audio decoder comprising control and status registers functional in concert with locally held memory tables and a subset of transmitted data contained in the audio stream to decode and calculate the number of bits of predetermined portions of a data block such as those allocated to a sample or a word of an incoming data stream as well as a frame length. (Ben: Abstract: Col 12, l. 47-67; Col 13, l. 1-20; Fig 3, 16) It would have been obvious to one of ordinary skill in the art at the time of the invention to form a decoding apparatus utilizing the Divine taught system and method of decoding a frame length of an AC-3 in combination with the Ben taught method of generating word and frame lengths of an MPEG. The average skilled practitioner would have been motivated

by market forces to make a decoder operable on a variety of incoming data formats and would have expected predictable results therefrom

7. Regarding claim 2

Divine in view of Ben teaches or suggests:

A decoding apparatus according to claim 1, wherein said size determination means is adapted to generate a size information and to supply said size information (f\_sz\_of\_blk) to said separation means (Divine: Col 39: l. 40-55: the block length field is used to separate and extract payload data).

8. Regarding claim 3

Divine in view of Ben teaches or suggests:

A decoding apparatus according to claim 2, wherein said size information is used by said separation means to separate said first data block from said data stream (Divine: Col 72, l. 59-67: first block data is separated and used to parse subsequent blocks based on reuse flags)

9. Regarding claim 4, 11

Divine in view of Ben teaches or suggests:

A decoding apparatus according to claim 1, wherein said processing of said size determination means is an accumulation processing for accumulating a determined bit number of predetermined portions of said first data block (Divine: Fig 7A-C, 8A-G: an accumulator receives a predetermined portion of an opcode word); (Ben: Abstract: Col 12, l. 47-67; Col 13, l. 1-20).

10. Regarding claim 5, 6, 12, 16

Divine in view of Ben teaches or suggests:

A decoding apparatus according to claim 4, wherein said plurality of data blocks are audio blocks of a media application frame, and said predetermined portions are mantissa portions (Divine: Abstract: Col 8, l. 33-40, 55-65: mantissa of audio frames or blocks are unpacked and de-quantized to produce PCM samples).

11. Regarding claim 7, 13, 17

Divine in view of Ben teaches or suggests:

A decoding apparatus according to claim 4, wherein said bit allocation processing is based on at least one psychoacoustic model, wherein power spectral densities are compared with masking curves in order to reveal said bit number (Divine: Col 112: l30-38: Divine discloses psychoacoustic models in keeping with the AC3 standard for decoding power spectral densities.

12. Regarding claim 8

Divine in view of Ben teaches or suggests:

A decoding apparatus according to claim 5, wherein said parallel processing means are arranged to parse bit stream information of a first frame of said data stream and then to jump to the start of a subsequent second frame, without waiting for the end of parsing of a side information of audio blocks provided in said first frame (Divine: Col 108, l. 20-67, Col 109, l. 1-58; Col 111, l. 47-67, Col 112, l. 1-5: discloses a parallel processing decoder for decoding a first frame of payload data, see above claim 1, and further discloses skip

routines for discarding unused data and jumping over frames in a bitstream while searching for a synchronization word).

13. Regarding claim 9, 14, 19

Divine in view of Ben teaches or suggests:

A decoding apparatus according to claim 8, wherein said separation means are arranged to unpack said side information of a first audio block, then parse and send an exponent information to a first processing unit of said parallel processing means, a bit allocation information to a second processing unit of said parallel processing means, and a mantissa block to a third processing unit of said parallel processing means, and then jump to a second audio block. Divine discloses a system and method functional to accomplish parallel processing of subsequent words in an audio stream including processing a mantissa and exponents a first frame and processing subsequent blocks in parallel. The manner in which the parallel processing mantissa and exponents are decoded represents a design choice on the implementer of the system, would have been obvious to vary and would have produced predictable results.

14. Regarding claim 18

Divine in view of Ben teaches or suggests:

A decoding apparatus, wherein said calculated length is calculated by performing a summation operation on said bit allocation information. (Divine: Col 13, l. 10-25; Fig 7B, 7C), (Ben: Col 12, l. 47-67; Col 13, l. 1-20: Fig 3, 16).



### **Response to Arguments**

15. Applicant's arguments with respect to claim 1, 10 have been considered but are moot in view of the new ground(s) of rejection.

### **Conclusion**

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. (please see form PTO-892)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL MCCORD whose telephone number is (571)270-3701. The examiner can normally be reached on M-F 7:30AM - 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CURTIS KUNTZ can be reached on (571)272-7499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. M./  
Examiner, Art Unit 2614

/CURTIS KUNTZ/

Supervisory Patent Examiner, Art Unit 2614